

10. Circulation / Traffic

Setting

This Chapter is derived from the City of Auburn General Plan text and Supporting Documentation as well as from the Auburn/Bowman Community Plan Circulation Element prepared by the County. The order of topics discussed is as follows:

Street System
Transit Service
Rail Transportation
Pedestrian and Bicycle Transportation

Street System

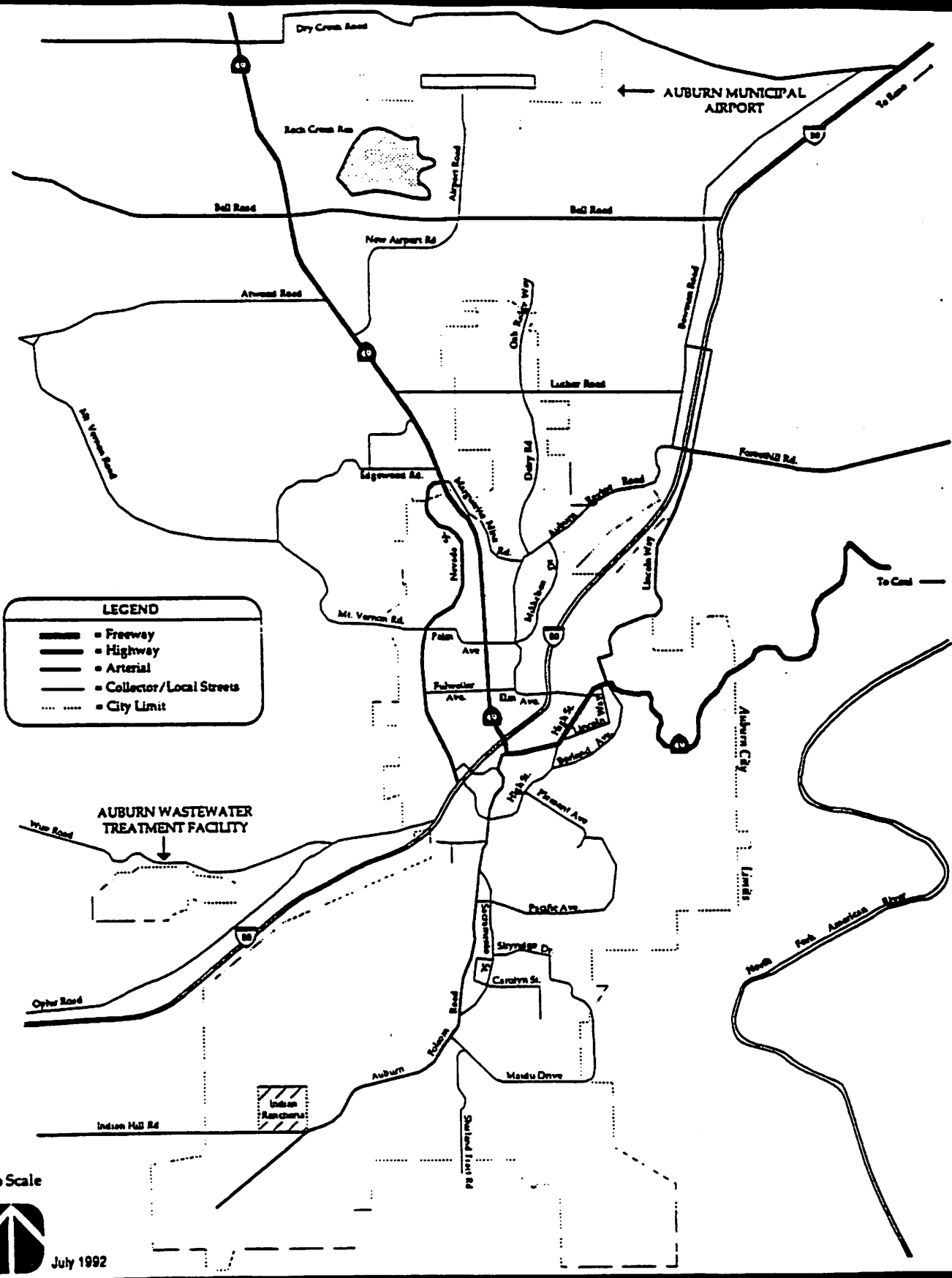
Roadways ~ Auburn's street system is predominately a two-lane road network. Only Interstate 80, Highway 49, Elm Avenue and Auburn Folsom Road provide four or more travel lanes.

Figure 10-1 shows the functional classification of the road network according to the following classifications:

- Freeways — Limited access highways
- Highways — Limited access regional roadways
- Arterials — Major streets providing through service to industrial and commercial areas and between cities
- Collectors — Streets that collect traffic from local streets within residential areas
- Locals — Streets whose primary purpose is to provide access to individual properties

Interstate 80 and Highway 49 are the two main routes through the City. Interstate 80 bisects the City in a northeasterly-southwesterly direction while Highway 49 bisects the City in a northwesterly-southeasterly direction. Interstate 80 has up to eight lanes through Auburn and six lanes east and west bound out of the City. Highway 49 is a two-lane highway through central Auburn increasing to a four-lane section from Lincoln Way to Dry Creek Road in north Auburn. Auburn Folsom Road also functions as a thoroughfare for traffic in the southern portion of Auburn and varies from two to four lanes (see Figure 10-1).

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CITY OF AUBURN GENERAL PLAN
 EXISTING STREET SYSTEM FUNCTIONAL CLASSIFICATION

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FIGURE 10-1

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In order to analyze the existing conditions for the roadway system, procedures and methodologies from the Highway Capacity Manual (HCM), Special Report 209, Transportation Research Board, 1985, were used. HCM techniques generate daily roadway capacities adjusted to incorporate factors that influence theoretical roadway capacity. These capacities were then compared to 1990 roadway volumes to determine a level of service (LOS). Level of service describes traffic flow conditions and varies qualitatively from LOS A (best) to LOS F (worst) — See Impact Evaluation Criteria following this section.

Average daily traffic counts (ADTs) provided by the City of Auburn Public Works Department and Caltrans are shown on Figure 10-2. These volumes were compared to the LOS criteria capacities to determine existing LOS. These capacities were generated using the Highway Capacity Manual techniques discussed above and are contained in the General Plan Supporting Documentation Transportation Evaluation Criteria (Table A-1). Figure 10-3 shows the level of service results.

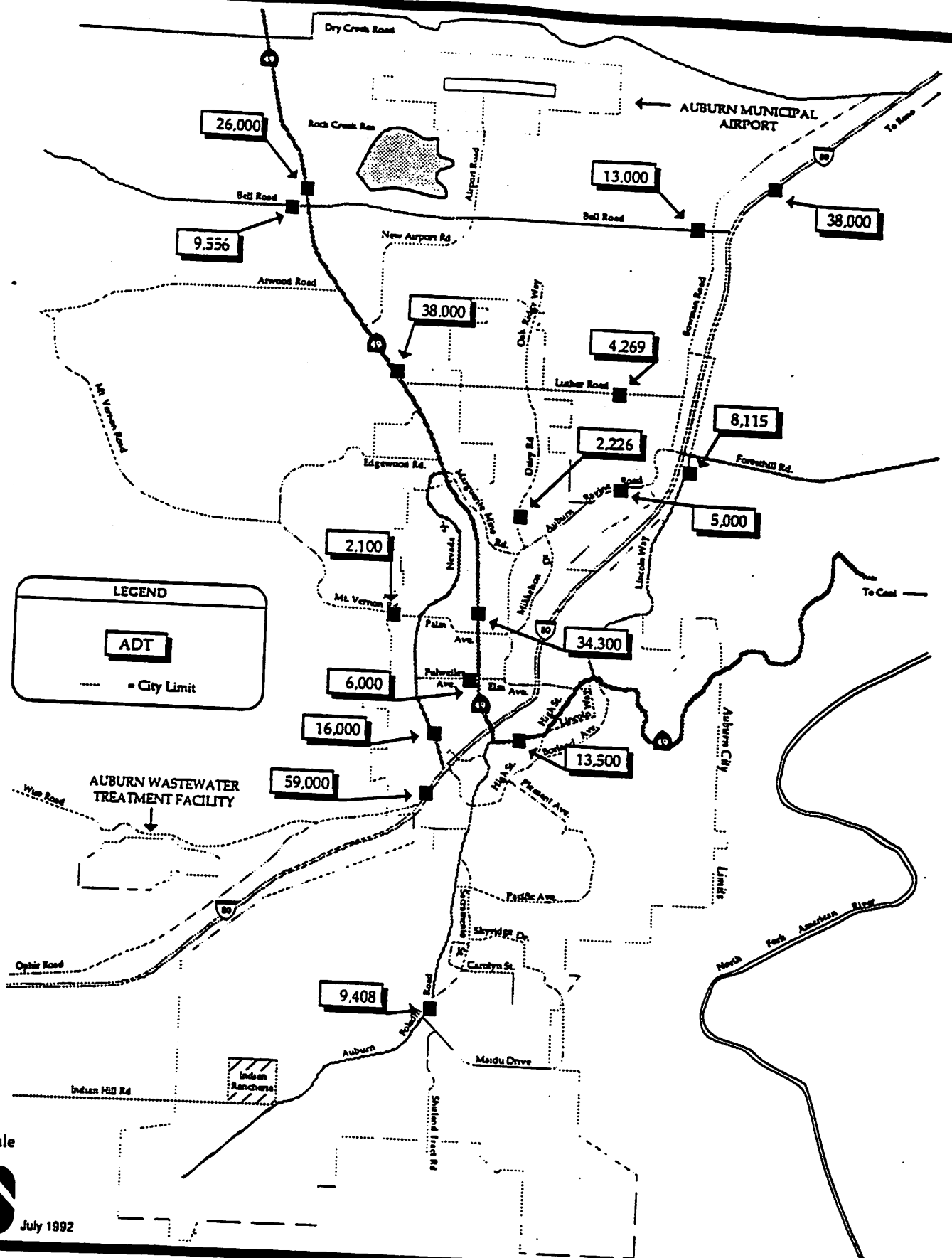
As shown, all City maintained roadways analyzed currently operate at or better than LOS D. There are, however, other design problems which significantly affect the safety and capacity of particular roadways.

- Streets which do not meet the recommended design standards should be widened to accommodate safe and efficient travel;
- The on-street parking allowed on Nevada Street significantly reduces its capacity and level of service. On-street parking on this street should be eliminated;
- Although Highway 49 operates at LOS C over the course of the day, peak hour operations suffer significantly. Improvements such as signal system coordination and median-divided access control would substantially enhance peak hour operations.

Intersections ~ In order to assess peak hour traffic operations, selected intersections were analyzed to determine existing peak evening hour LOS. This type of intersection analysis is important because it reveals peak hour operational problems that might not be evident in analyzing daily volumes on road segments. Intersections were also analyzed using Highway Capacity Manual techniques and procedures. Tables A-2 and A-3 of the Transportation Evaluation Criteria in the Supporting Documentation define the analysis for the intersections. Figure 10-4 shows the peak hour LOS of each analysis intersection. Of the intersections analyzed, the following operate at or exceed LOS D during the evening peak hour.

- Elm Street at High Street operates at LOS E during the evening peak hour due to heavy eastbound and northbound left turning volumes. This intersection should be restriped to include a double left turn lane and a combination through/right lane for the northbound approach. The east bound approach should also be restriped to include an extensive left turn lane, a combination left/through lane and an

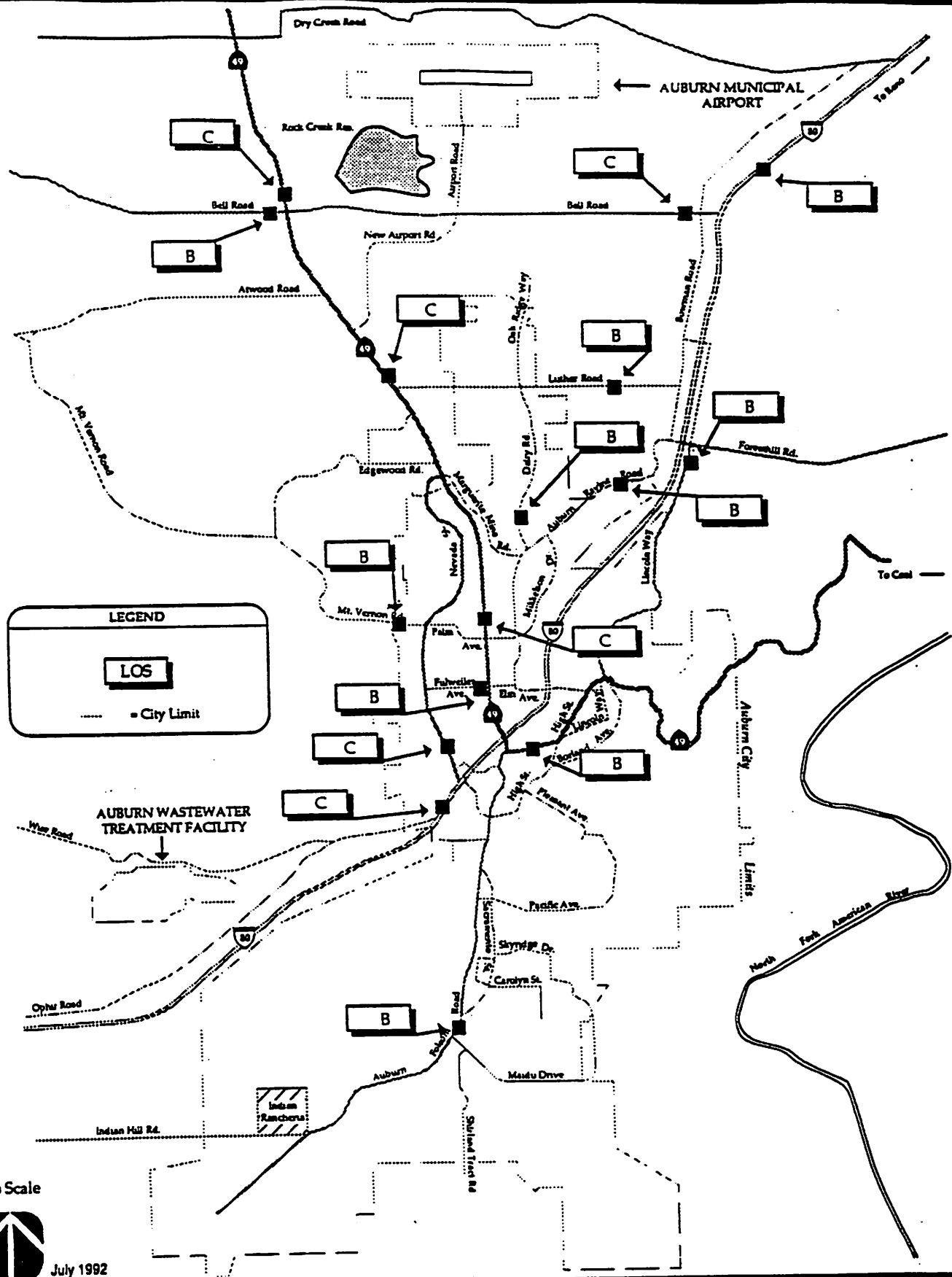
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CITY OF AUBURN GENERAL PLAN
 1990 Average Daily Traffic Volumes
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FIGURE 10-2

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CITY OF AUBURN GENERAL PLAN
1990 AVERAGE DAILY LEVEL OF SERVICE

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FIGURE 10-3

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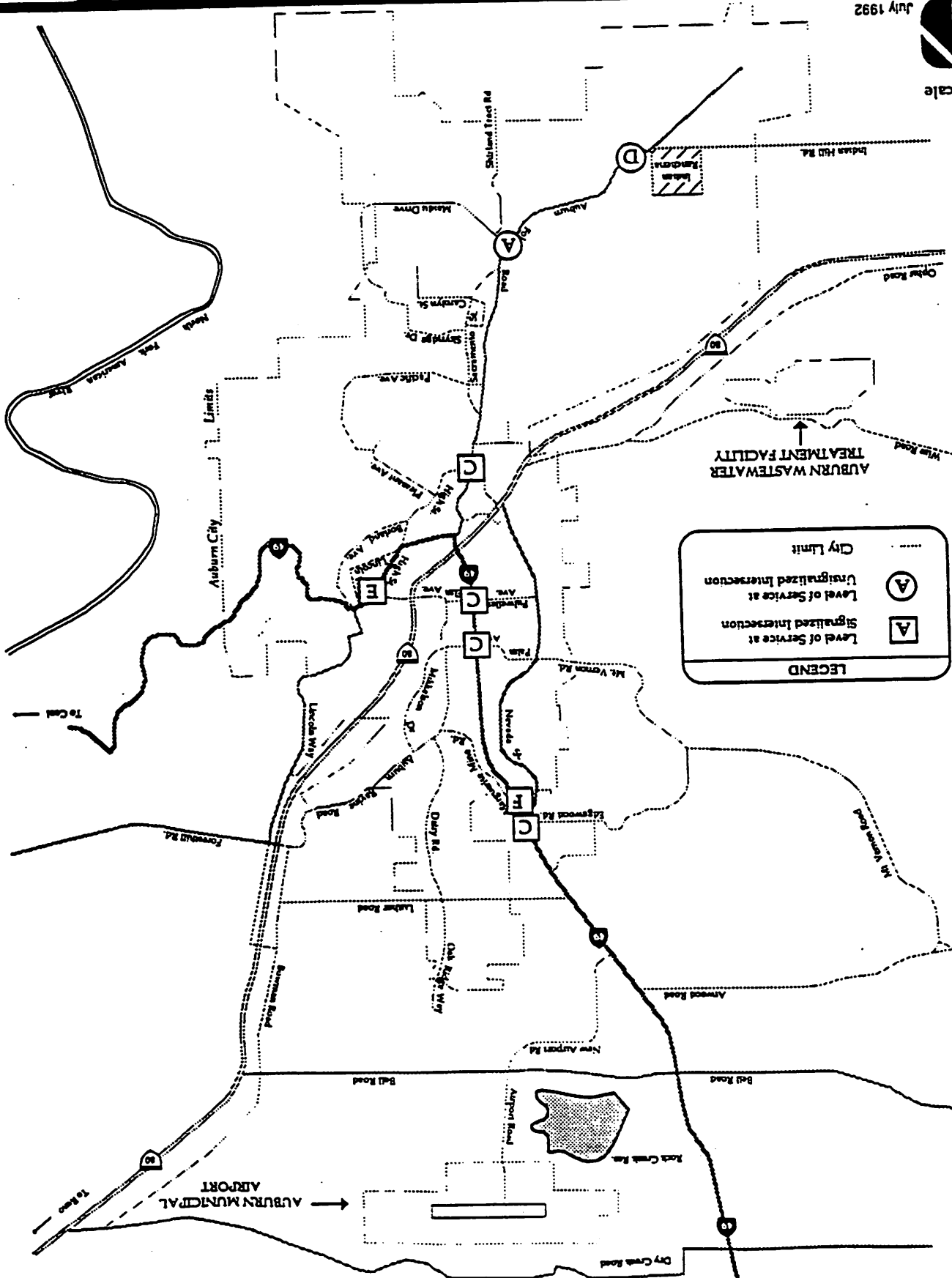
CITY OF AUBURN GENERAL PLAN
1990 PEAK HOUR LEVEL OF SERVICE FOR SELECTED INTERSECTIONS

FIGURE 10-4

July 1992



No Scale



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exclusive right turn lane. This improvement, along with adjusted signal timings, will improve operations to LOS C.

- **Nevada Street/Marguerite Mine Road at Highway 49** operates at LOS F during the evening peak hour due to a heavy eastbound left turning movement and high through volumes on Highway 49. The eastbound approach should be restriped to include an exclusive left turn lane and a combination left, through, and right lane. This improvement, along with adjusted signal timings, will improve the operation to LOS C.
- **Indian Hill Road at Auburn Folsom Road** operates at LOS D during the evening peak hour due to a heavy eastbound left turning movement. Operations will be improved with signalization, which has been approved for funding in 1993. The City should continue to monitor the volumes at this intersection for future signalization based on the warrant criteria set forth in the Transportation Evaluation Criteria in the Supporting Documentation.

It should be noted that only a few major intersections were selected for General Plan analysis.

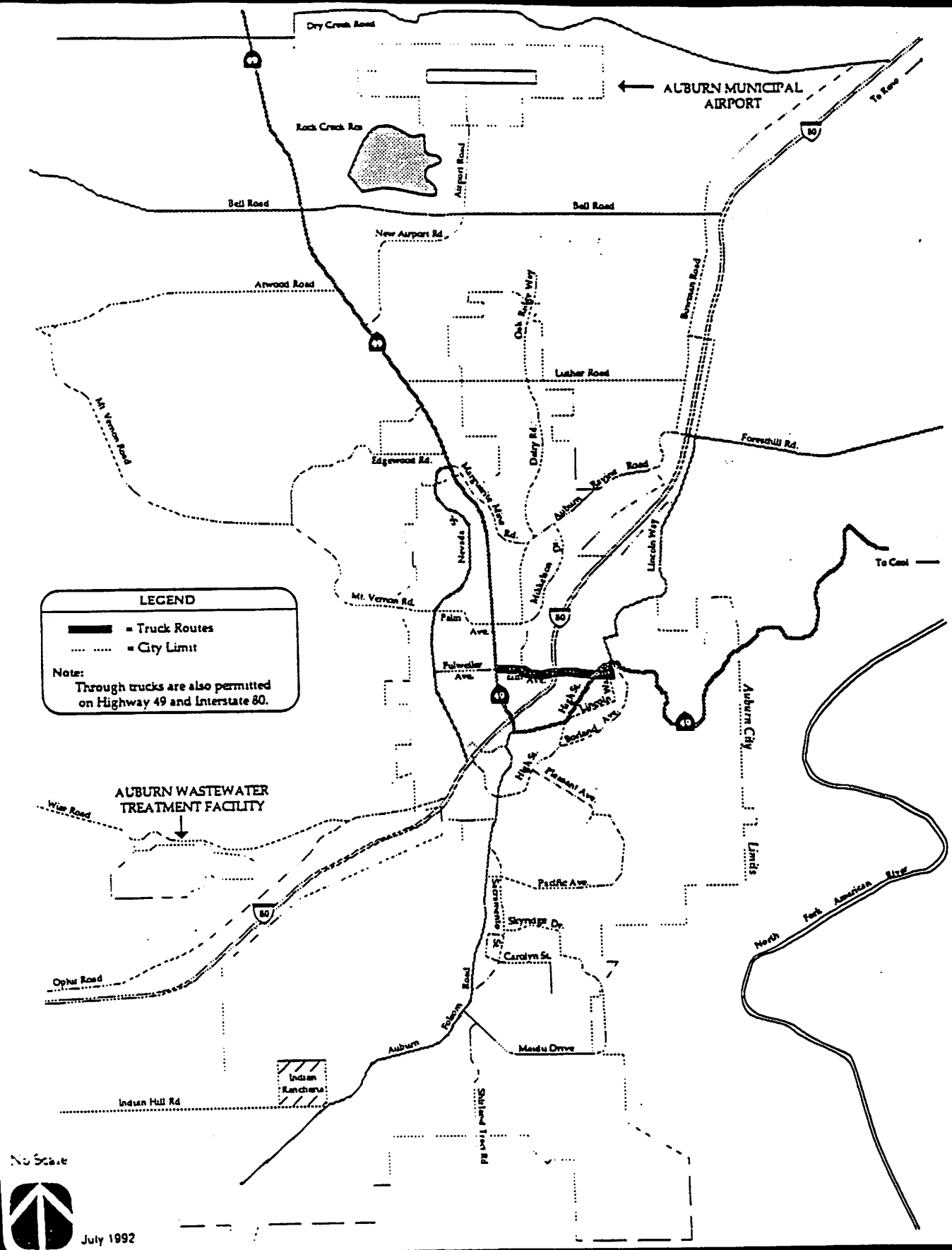
Truck Routes ~ Figure 10-5 shows the truck routes through Auburn. These routes are designed to allow truck traffic to pass through the City with minimal impact on local vehicular and pedestrian traffic.

Roadway Design Standards ~ Currently, Auburn's Municipal Code contains roadway design standards. The standards provide a limited level of detail for the necessary features within the right-of-way. Revisions to these standards are necessary for the following reasons:

- 1) The application of the standards should be based on functional classification of the roadway, not the type of zoning proposed adjacent to the street. This ensures route continuity and provides safer operating conditions by minimizing the changes to driver expectation.
- 2) The current standards do not require bike lanes. Provision of bike lanes enhances recreational activities, enhances air quality and provides safer operating conditions for motorists and bicyclists.
- 3) The standards should detail all features including striped lane widths, on-street parking, bike lanes and pavement section requirements.

Parking Standards ~ Article 9 of the Auburn Municipal Code defines the standards for off-street parking and loading. Items such as the number of required spaces, design standards and maintenance are well-defined in this article. There currently are no guidelines for the circumstances in which on-street parking is allowed or disallowed.

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CITY OF AUBURN GENERAL PLAN TRUCK ROUTES

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FIGURE 10-5

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Transit Service

Public Facilities ~ Auburn Transit, Placer County Transit (PCT), and the Consolidated Transportation Services Agency (CTSA) combine to provide public transit service in the Auburn area (see Figure 10-6). Auburn Transit, better known as the Auburn Mini-Bus, currently operates passenger bus service on a deviated route schedule. Service is provided six days a week and both buses used are lift-equipped to serve elderly and handicapped patrons.

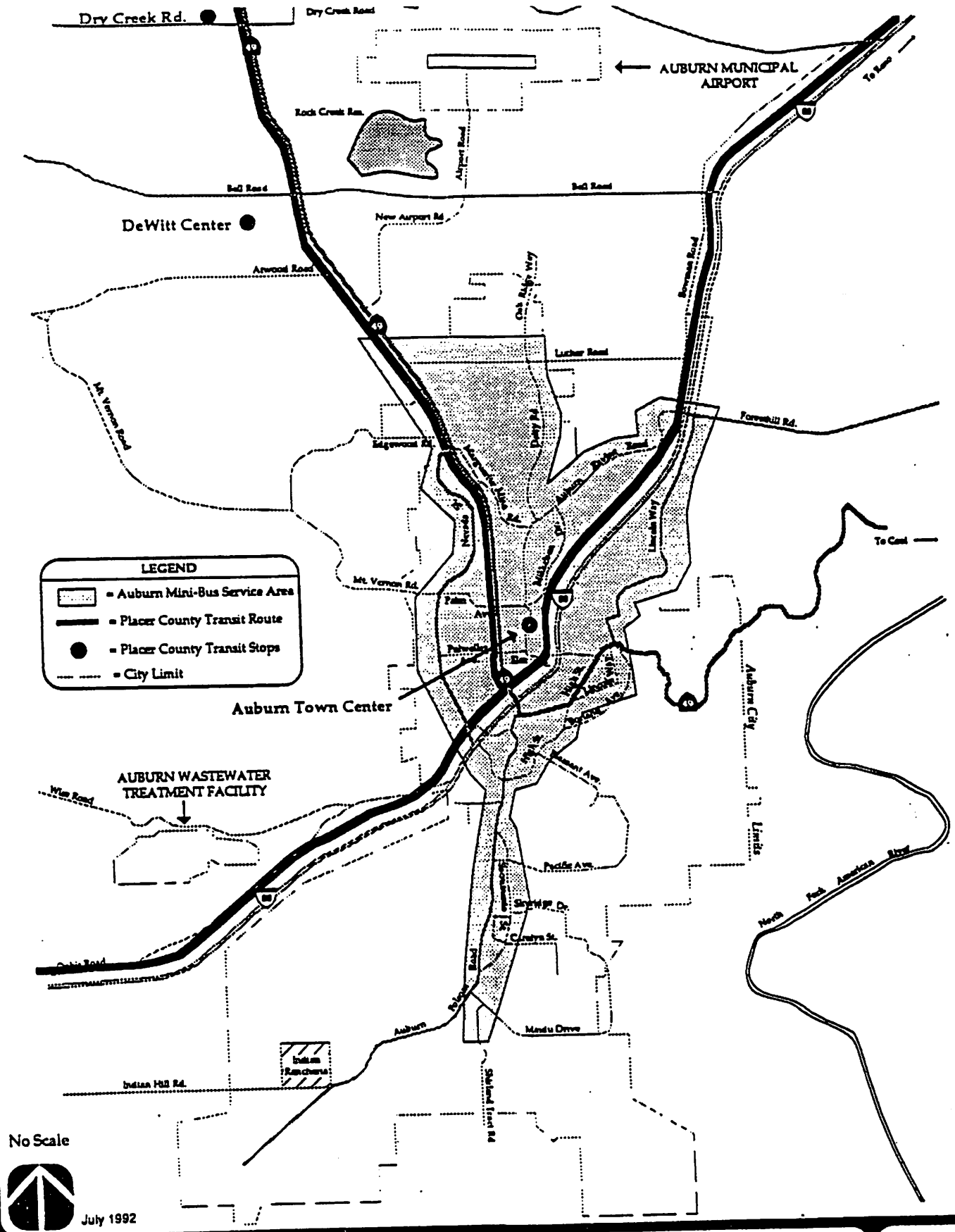
Placer County Transit operates a combination fixed route/route deviation bus service (see Figure 10-6). The deviation service allows for a diversion of up to one mile from the fixed route to serve patrons who have requested the service at least 24 hours in advance. In the Auburn area, PCT service has eight buses available for service five days a week. The buses carry a maximum of 30 passengers with an average bus size of 18- to 19-passengers. Figure 10-6 shows the PCT routes and the transit service area of the Auburn Mini Bus.

Consolidated Transportation Service Agency (CTSA) is an independent nonprofit organization that provides transportation services to over 300 individuals within Placer County who are disabled or seniors. As part of their service, CTSA also provides transportation services to the Association of Retarded Citizens within Placer County. Both CTSA and the Auburn Transit coordinate their activities on an ongoing basis by providing notice of new or expanded transportation services that may affect each operation and an opportunity to participate in planning for the provision of service.

Service quality of the Auburn Mini Bus ranks well according to a June 1989 performance audit of the Auburn Mini Bus. Audit authors made the conclusion that the service adequately met the transit needs of Auburn residents. Further, the combined efforts of the Auburn Mini Bus, PCT, and CTSA have initiated a well-coordinated public transportation system which inherently meets the transportation needs of most Auburn area residents. Nevertheless, the Placer County Regional Transportation Plan recommends a comprehensive transit demand and needs analysis to be performed by the Placer County Transportation Commission that determines the overall demand for transit and paratransit services and that determines if all of the transit needs are being met within the region.

Caltrans offers a different type of transit service, that of ridesharing. Caltrans provides a commuter matching service and operates park-and-ride lots in the Auburn area. The commuter matching service allows commuters to contact other commuters living in the same vicinity to arrange ride-sharing activities. In 1990, 259 commuters from the Auburn area requested matching information from the Caltrans Rideshare office. Caltrans officials estimate that about 25% of those expressing interest actually participate in ridesharing. Comparing this percentage with statistics regarding park-and-ride lot use in the Auburn area, this would seem to be a reasonable estimate. Table 10-1 below contains ridesharing use statistics for three Auburn area park-and-ride lots:

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**CITY OF AUBURN GENERAL PLAN
TRANSIT SERVICE IN THE AUBURN AREA**

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FIGURE 10-1

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**Table 10-1
PARK-AND-RIDE STATISTICS, 1990**

Location	Parking Spaces	Occupied Parking Spaces	Bicycle Lockers	Bicycle Lockers Occupied
Atwood Road	42	16	4	1
Bell Road	33	15	8	1
Lincoln Way	21	15	4	1
TOTAL	96	46	16	3
SOURCE: Caltrans Rideshare Office. 1990				

SOURCE: Auburn General Plan Table V-2, p.V-18, September 1992.

Private Facilities ~ Auburn's private transit facilities include two different types of services. One private company, Greyhound Lines, provides intrastate and interstate bus service. Other private companies provide charter bus service along the Interstate 80 corridor between Reno and San Francisco, with stops in Auburn.

Private van service to the airport and the Bay Area is available as are taxi and limo services.

Rail Transportation

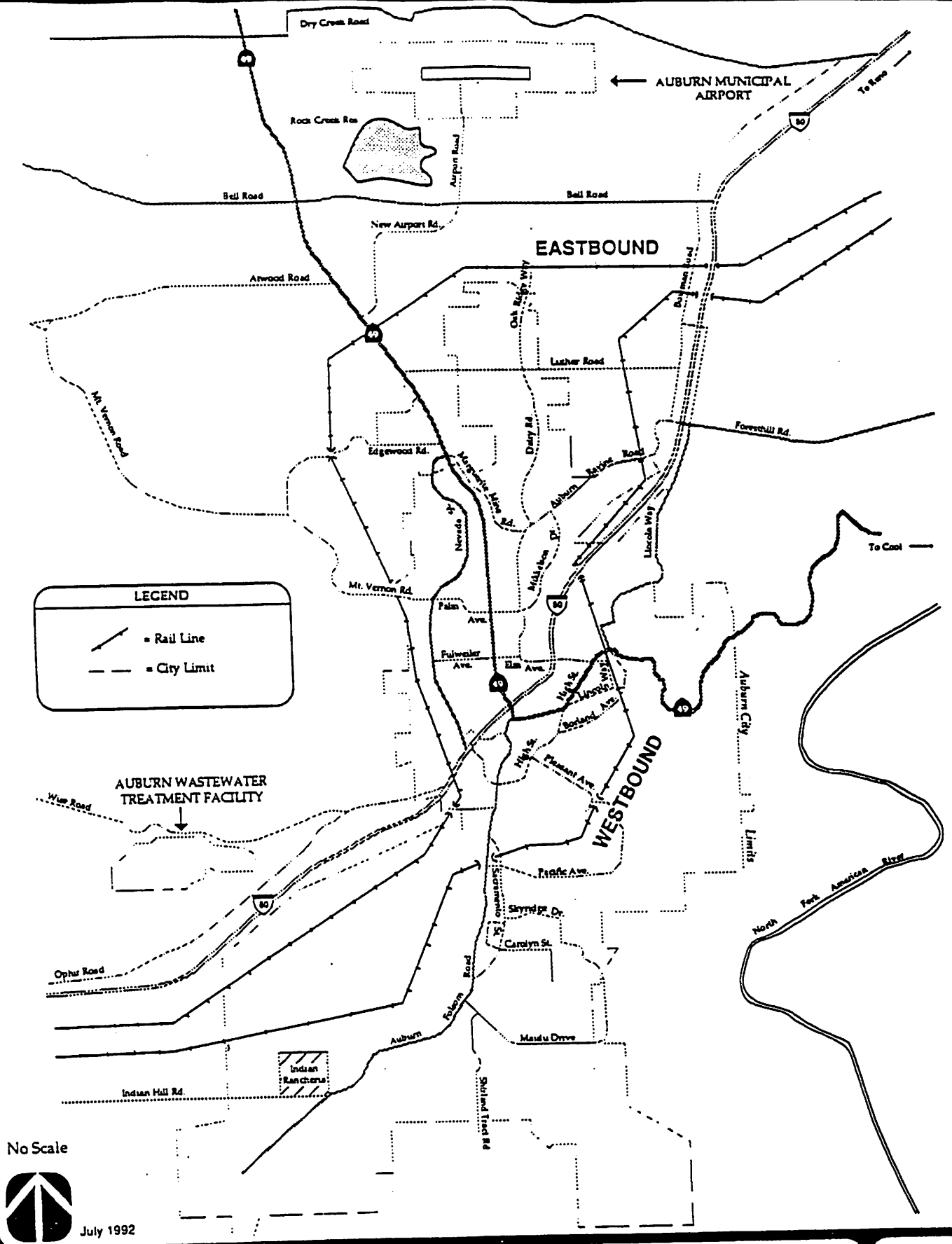
Facilities/Services ~ Rail facilities in Auburn include two sets of Southern Pacific tracks that run through Auburn (See Figure 10-7). One set of tracks is used for eastbound trains and the other set of tracks serve westbound trains. Auburn is one of the last locations in the nation where separate parallel double sets of tracks exist to serve directional train traffic. Although the tracks exist, freight and passenger rail services are not currently available in Auburn due to the absence of a passenger and/or freight rail station.

Initiation of a commuter rail route with an Auburn station could occur within the time frame of the Auburn General Plan. In the recent Placer County Commuter Rail Feasibility Study, Auburn is listed as a potential station site. Subsequent to the study, the Placer County Transportation Commission identified the Nevada Street/Blocker Drive location as the preferred station site.

Air Transportation

Facilities ~ The City of Auburn Municipal Airport is the only public airport within the General Plan study area. The airport is currently zoned as an industrial-use design control district. Typical land uses associated with this zoning are aviation-related manufacturing, sales, and services along with general industrial and commercial land uses. The City owns and manages the airport, with the City Manager responsible for airport management.

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CITY OF AUBURN GENERAL PLAN EXISTING RAIL FACILITIES

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Figure 10-7

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The Auburn Municipal Airport is located approximately four miles north of Downtown Auburn and one-half mile east of Highway 49. Access to the airport is via Airport Road, a two-lane, north-south paved road between Bell Road and the airport. Bell Road connects to both Highway 49 and Interstate 80. The airport covers 210 acres and has an airfield elevation of 1,523 feet above mean sea level. Figure 10-8 shows the location of the airport.

Existing facilities at the airport include the following:

Airfields

- One paved runway, Runway 7-25, which is 3,100 feet long and 60 feet wide with an effective upward gradient of 1.7% to the east. Pavement type is asphalt and its gross weight strength is rated at 30,000 pounds per single-wheel landing gear aircraft. Pavement and runway markings, according to the master plan, are in fair condition. The runway also includes medium intensity runway and threshold lights.
- One 30-foot wide parallel, asphalt taxiway located 150 feet (centerline-to-centerline) from the runway with one exit near mid-point, in addition to the connections at each end. The taxiway also has medium intensity edge lights.

Aircraft Parking and Hangars

- 187 open tiedowns, 40 port-a-port hangars, 14 T-hangars, 10 aircraft shelters, and seven other conventional hangars.

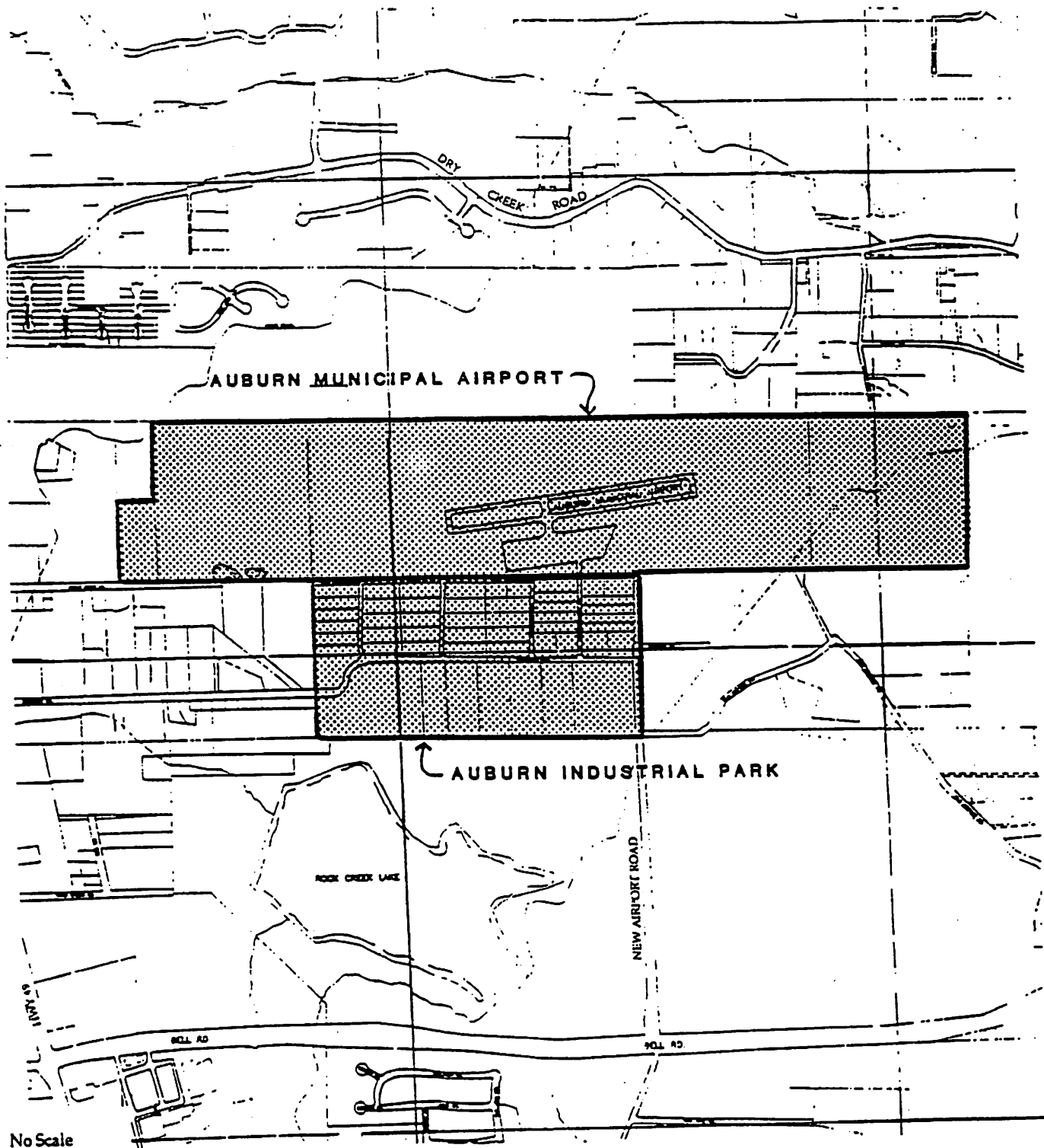
Other Facilities

- Two 8,000-gallon underground fuel tanks for storage to 80 octane and 100 octane aviation fuel;
- Miscellaneous industrial and commercial businesses including one restaurant.

Services ~ Air transportation services at the Auburn Municipal Airport are referred to a Fixed-Base-Operators (FBOs). FBOs at the Auburn Airport provide flight instruction, charter service, pilot supplies, avionics sales and service, aircraft sales, rental salvage, fuel, and maintenance.

Use ~ As of August 1986, there were 195 single-engine and 11 twin-engine aircraft at the Auburn Airport for a total of 206 based aircraft. For 1990, airport officials estimate 210 based aircraft occupy aircraft parking facilities. In 1986, the 206 based aircraft were responsible for 35,000 "local" operations where the aircraft took off and landed at the Auburn Airport. An additional 33,000 "itinerant" operations were generated at Auburn by aircraft taking off at one airport and landing at another airport. The 1990 estimate for total operations was approximately 65,000, which represents little change from the 1986 total of 68,000 operations.

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No Scale



July 1992

CITY OF AUBURN GENERAL PLAN
AUBURN AIRPORT / INDUSTRIAL PARK

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Figure 10-

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The decline in total operations seems to indicate a leveling off compared to increases in aviation activity at the Auburn Municipal Airport experienced from 1980 to 1986. During this six year time period, based aircraft at Auburn increased from 105 to 206, a 96% increase. According to the AMAMP, based aircraft is expected to increase reaching 360 total based aircraft by 2007. Operations are also expected to increase, reaching 79,000 by 2007. Nevertheless, since 1986, Auburn's aviation growth has not materialized. Therefore, current aircraft parking and operations capacity is sufficient to meet current demand. If demand increases as predicted in the AMAMP, however, expansion or improvement of airport facilities may be required.

Pedestrian and Bicyclist Transportation

Facilities ~ Bike routes and pedestrian walkways are typical examples of pedestrian and bicycle transportation facilities. Bike routes are divided into three categories as follows (Table 10-2):

Table 10-2
PLACER COUNTY BIKE ROUTE CLASSIFICATIONS

Class I	Provides a completely separated facilities designed for the exclusive use of bicycles and pedestrians with cross flows by motorists minimized.
Class II	Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.
Class III	Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

SOURCE: Placer County Regional Transportation Plan, 1988.

In Auburn, plans and studies such as the Auburn Park Conservancy Non-Auto Circulation Plan and the Auburn Ravine Trail Master Plan have identified locations for bike routes and pedestrian walkways. Placer County has also designated bike routes and pedestrian walkways in and around Auburn through the Regional Transportation Plan and the Placer County Bikeways Master Plan.

Use ~ Although bicycle routes are planned for in Auburn, few currently exist. Sidewalks and pedestrian crossings are present throughout Auburn, but rails or paths separated from vehicular traffic are almost non-existent. Currently, pedestrians and bicyclists often utilize Auburn's street system. The most apparent examples of pedestrian activity on the street system are near attractions such as parks and shopping centers. Examples include Ashford Park on Auburn Ravine Road, Recreation Park on Recreation Drive and Auburn Town Center on Elm Street. These situations illustrate the ways in which the current facilities do not adequately meet the bicyclist and pedestrian needs.

**Impact
Evaluation
Criteria**

Level of Service. Level of Service (LOS) is a quantitative and qualitative measure of traffic conditions on isolated sections of roadways ("links") or intersections (see Table 10-3 below). LOS ranges from A, with no congestion, to level F, where the system fails with "gridlock" or stop-and-go conditions prevailing. The quantitative basis for determining LOS is the ratio between existing traffic volume (V) and the calculated capacity (C), the "V/C ratio".

**Table 10-3
STREET SYSTEM DAILY LEVEL OF SERVICE CRITERIA**

Facility Type	Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway	4	22,680	35,010	49,860	60,300	64,800
	6	34,020	52,470	74,880	90,360	97,200
	8	45,360	70,020	99,810	120,510	129,600
Highway	2	N/A	N/A	18,900	22,230	23,940
	4	N/A	N/A	39,870	45,810	48,780
	6	N/A	N/A	61,380	69,660	73,710
Typical Arterial	2	N/A	11,790	18,900	20,520	22,140
	4	N/A	24,750	39,150	41,760	44,730
	6	N/A	37,890	59,490	63,000	67,320
Typical Collector	2	N/A	11,610	16,650	18,720	20,070
	4	N/A	24,570	35,100	38,610	40,950
N/A = Not Attainable SOURCE: <i>Highway Capacity Manual, Special Report 20-9</i> , Transportation Research Board. 1985.						

SOURCE: Auburn General Plan Table A-1.

Ref: Final
EIR, p.26

In the past, the City of Auburn has utilized level-of-service C as the threshold below which impacts are considered significant. However, as part of the formation of the County/City's Congestion Management Plan, that threshold has been lowered to LOS-D.

Impacts

- Increased congestion on the street system** – Development permitted under the Preferred Plan would increase traffic and congestion on City streets. This impact is fundamentally a cumulative impact with the major components being "project" (that is the City's General Plan) traffic and regional through traffic including that from the County. A separate quantitative analysis of project traffic alone is not provided because it would lack meaning given the inevitability of the through traffic. However, it was estimated in the Auburn/Bowman Community Plan Circulation Element that over two-thirds of the future traffic on Highway 49 is expected to be traffic with either an origin or destination within the Community Plan area (p. 15) which is roughly similar in proposed area of urbanization to the City-proposed Sphere of Influence. Consequently, the basic impact of increased congestion is assignable to the Plan, as well as to cumulative conditions.

The magnitude of the traffic increase was projected by HBA using the MINUTP travel demand model developed by Placer County for the

Auburn/Bowman Community Plan. The model was run with the following assumptions:

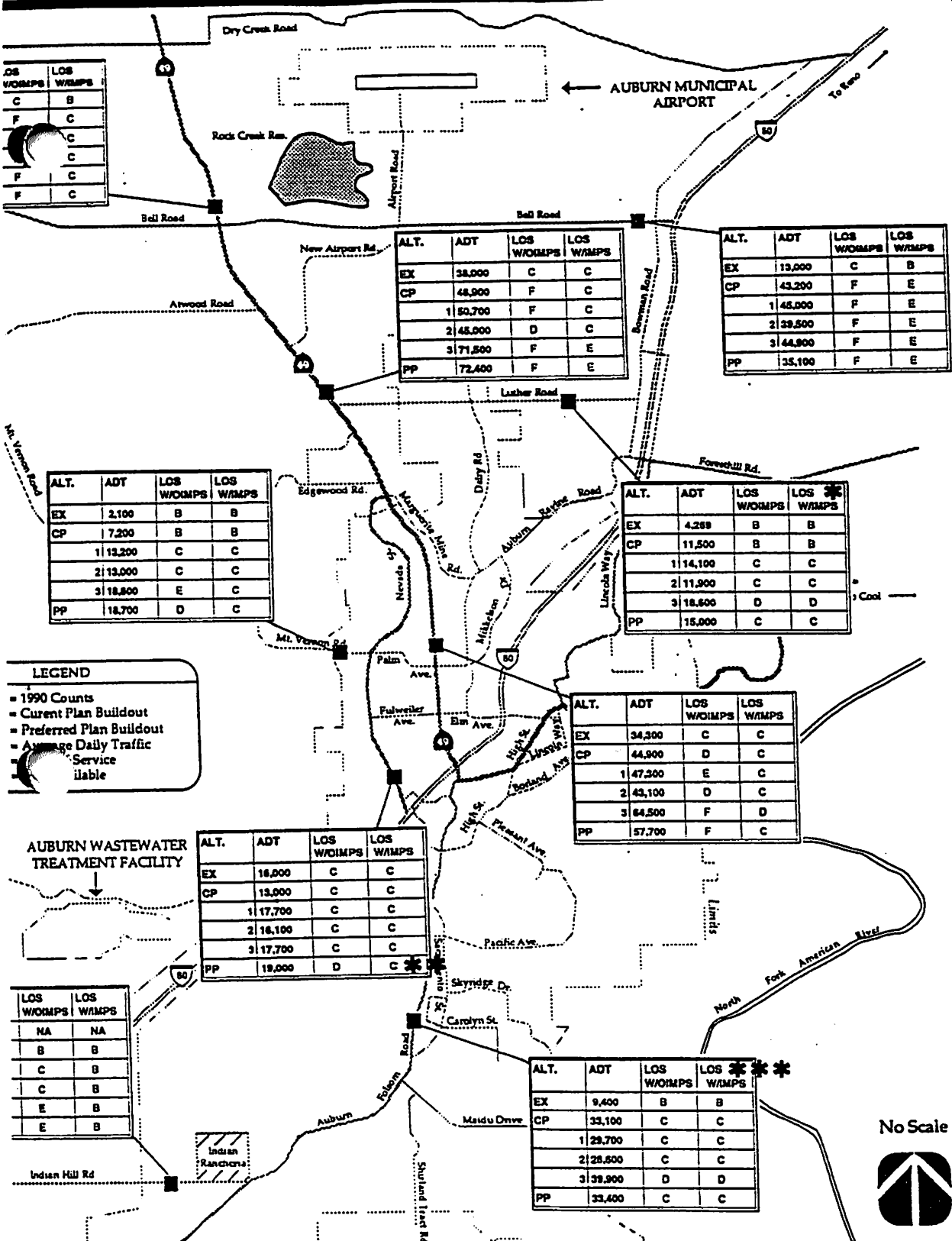
- 1) Forecasts contained in this document are based on a buildout scenario of the Land Use Plan;
- 2) Residential, commercial, mixed-use and industrial land uses were assumed to be 80% utilized at buildout due to the need for roads and other public rights-of-way;
- 3) Maximum building intensities were used to calculate the number of single-family and multi-family dwelling units except for the MDR and MDR/MH designations. For these designations, a ratio of eight dwelling units per acre was used to reflect existing development trends; and
- 4) Placer County land use plans for Dewitt Center are intended to reduce dependence on the automobile. As a worst case scenario, the travel demand forecasts for the City of Auburn assume no reduction in automobile trips as a result of the mixed use development planned for Dewitt.

The model was run for street segments only. The model results are shown in Figure 10-9 for both the Preferred Plan and five other scenarios, including existing conditions. As shown, daily traffic volumes are projected to increase by varying amounts on different street segments. On Nevada Street, for example, traffic volumes are projected to increase by only 3000 Average Daily Trips (ADT) or 19% due to the Preferred Plan compared to an increase of 16,600 ADT or 790% on Mt. Vernon Road.

Figure 10-9 also shows levels of service (LOS) with and without road improvements recommended in the Draft General Plan. This provides the primary basis for the following discussion of impacts within City Limits and within the Sphere of Influence; references to the results of the County's analysis of intersections is also made.

Congestion within City limits ~ The Plan's impact depends not only on the amount of traffic generated, but also on the offsetting effect of recommended improvements to the extent that they are implemented. The General Plan Goals and Policies call for continued monitoring of traffic conditions and improvements to roads and intersections as necessary to maintain LOS D as shown in the excerpt below (Table 10-4).

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No improvements are proposed as part of the Draft General Plan.
 The threshold for LOS on a 2 lane arterial is 18,900 ADT. Since Nevada Street is proposed to be a 3 Lane arterial, its capacity will be augmented enough to be classified as LOS C.
 No changes are proposed for this segment of Auburn Folsom Road by the Draft General Plan.

BUILDOUT TRAVEL DEMAND FORECASTS & LEVELS OF SERVICE WITH AND WITHOUT PROPOSED GENERAL PLAN IMPROVEMENTS

FIGURE 10-9.

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Table 10-4
CITY OF AUBURN GENERAL PLAN
RELEVANT TRAFFIC GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1 Provide and maintain a comprehensive, safe, and efficient transportation system.

Policies

- 1.1 The City shall maintain a peak hour level of service "D" at City-maintained intersections and a peak hour/daily level of service "D" on City-maintained roadways as measured by the most recent Highway Capacity Manual and adopted by the City Council.

(Note: One or both of the roadway level of service standards shall apply to roadways that are impacted by proposed development projects based on the level of impact associated with each project as determined by the City.)

- 1.2 Widen intersections and streets where additional capacity is required.

- 1.3 The City shall develop a Transportation System Management (TSM) program to assure efficient utilization of existing transportation facilities.

(Note: TSM is a local program, Congestion Management Program is regional.)

- 1.4 Update and use the traffic model developed for the General Plan to analyze impacts associated with future development.

- 1.5 Designate truck routes to avoid residential areas and low overcrossings.

- 1.6 Support improvements to Highway 49.

- 1.7 Support the construction of an improved connection between Highway 49 and Interstate 80.

The General Plan text calls for the following specific improvements (pp. V-43, V-44):

1. Auburn Folsom Road - Improve a four-lane arterial standard from Indian Hill Road to Maidu Drive.
2. Indian Hill Road - Improve to a four-lane arterial standard from Auburn Folsom Road to Interstate 80.
3. Bell Road - Improve to a four-lane arterial standard from Highway 49 to Interstate 80.
4. Nevada Street - Improve to a three-lane arterial standard from Highway 49 to Interstate 80.
5. Mt. Vernon Road - Improve to a two-lane arterial standard from Atwood Road to Nevada Street.
6. Atwood - Improve to a two-lane arterial standard from Mount Vernon Road to Highway 49.

Projected traffic volume on selected City streets indicate generally acceptable conditions even without the recommended improvements. The exceptions are:

- Indian Hill Road, projected to operate at LOS E without improvements, will operate at LOS B when the recommended widening of the Road to four lanes is completed;
- State Route 49, projected to operate at LOS F without improvements, will operate at LOS C when the anticipated widening to six lanes is completed; and
- Interstate 80. According to HBA, I-80 will reach LOS F at General Plan buildout (2012).

It should be noted that the Route 49 project was included in Placer County's Regional Transportation Improvement Plan (RTIP), but was not funded by the California Transportation Commission in the 1992 State Transportation Improvement Program (STIP). Since this project is not on the STIP it cannot be considered assured, and in a worst case scenario, the four lane condition could persist.

As described above, there is no analysis available of City intersections based on buildout of the City's Draft General Plan. However, a rough idea of future conditions can be derived from the projections made by the County as part of the Auburn/Bowman Community Plan MINUTP analysis. That analysis included 18 intersections located within the City of Auburn, 26 intersections within the proposed Sphere of Influence, and 2 intersections outside of the Sphere of Influence (see Table 10-5). Since the County's analysis is based upon County rather than City designations outside of City limits, it cannot be used directly for predictions of conditions due to Auburn General Plan buildout. However, except for SR49, Bell Road, and Mt. Vernon Road, the County's daily volume projections on street segments are close to those of the City (See Figure 10-10).

Eleven of the 18 City intersections evaluated were projected to operate below LOS C, four of which were on SR49 without road improvements. (All intersections were LOS E or F.) Three of these intersections are on Auburn Folsom Road where the County's daily volume forecasts are with one percent of those of the City. After County proposed road improvements 13 of the 18 sampled City intersections were projected to fall below LOS C, and 10 were projected to fall below the target of LOS D. Unlike projected conditions in the Sphere of Influence, impacted intersections within the City are not confined to SR 49.

While Draft General Plan Circulation Element Policy 1.2 calls for widening intersections where additional capacity is required, the potential effectiveness of these improvements is untested. Impacts to intersections may remain unmitigated, particularly in the downtown where volume-to-capacity ratios could be quite high and the ability to widen is restricted. Similar limitations may occur at various I-80 ramp intersections where poor geometrics have become established (e.g., I-80 eastbound/Elm Avenue) or where recent improvements have been made but no additional right-of-way remains for future needs (I-80/SR49).

CITY EST	55700ADT
CNTY EST	59200ADT
DIFFRNC	3500(6%)

CITY EST	35100ADT
CNTY EST	21300ADT
DIFFRNC	13800(39%)

CITY EST	72400ADT
CNTY EST	55900ADT
DIFFRNC	16500(23%)

CITY EST	18700ADT
CNTY EST	9400ADT
DIFFRNC	9300(50%)

CITY EST	15000ADT
CNTY EST	14600ADT
DIFFRNC	400(3%)

CITY EST	57700ADT
CNTY EST	40900ADT
DIFFRNC	16800(29%)

CITY EST	19000ADT
CNTY EST	16700ADT
DIFFRNC	2300(12%)

CITY EST	21900ADT
CNTY EST	20500ADT
DIFFRNC	1400(6%)

CITY EST	33400ADT
CNTY EST	33800ADT
DIFFRNC	400(1%)

LEGEND	
EX	= 1990 Counts
CP	= Current Plan Buildout
PP	= Preferred Plan Buildout
ADT	= Average Daily Traffic
LOS	= Level of Service
NA	= Not Available



Note: Volume forecasts from the Auburn Bowman Community Plan are based on full Community Plan Buildout with the existing street system; for SR49, this is 4 lanes which inhibits total volumes somewhat compared to the 6 lane condition.

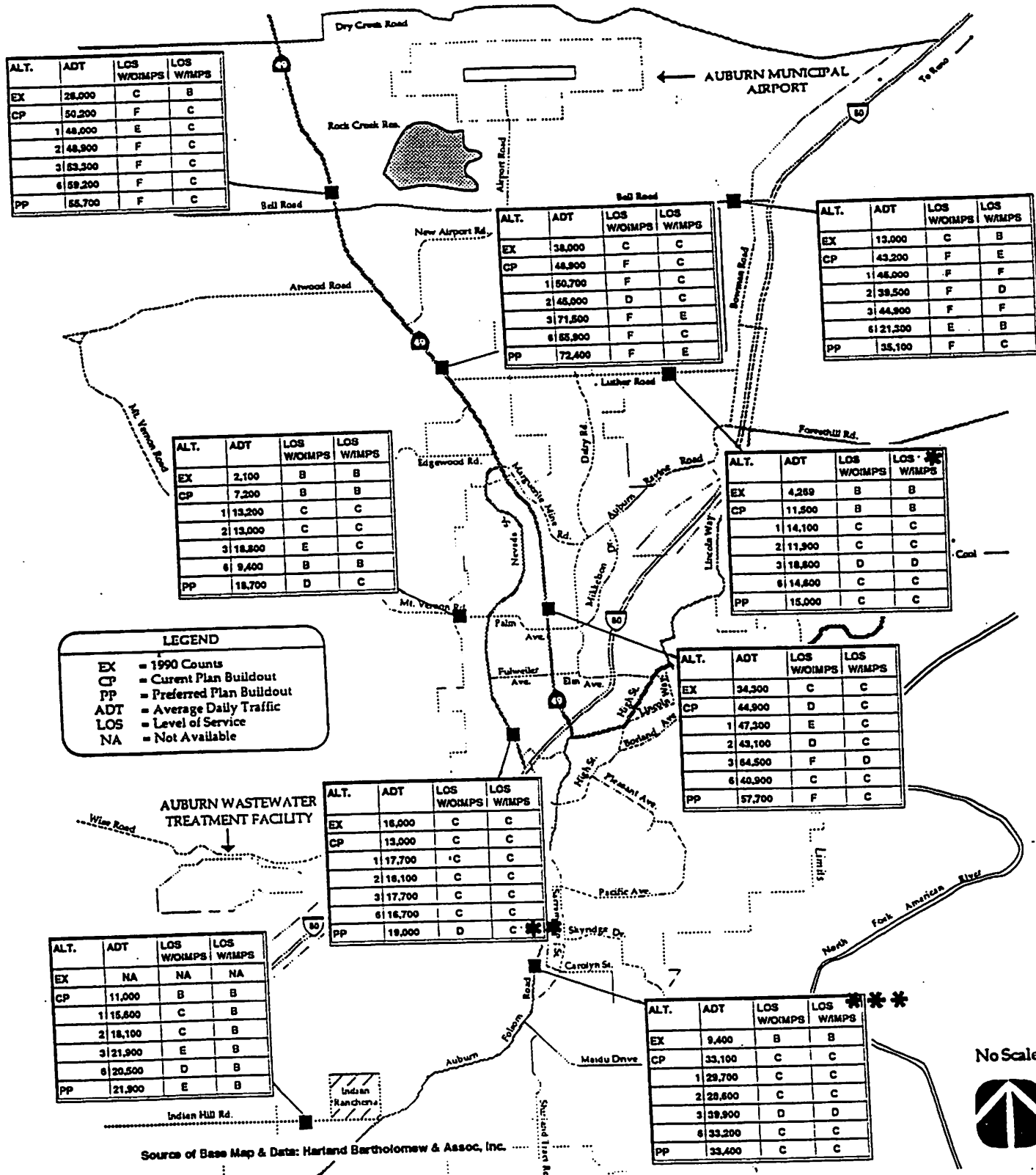
Source: "City of Auburn General Plan" page V-45 and "Auburn/Bowman Community Plan", Page 315

CITY / COUNTY TRAFFIC ESTIMATES COMPARISON

FIGURE 10-1

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- * No improvements are proposed as part of the Draft General Plan.
- ** The threshold for LOS on a 2 lane arterial is 18,900 ADT. Since Nevada Street is proposed to be a 3 Lane arterial, its capacity will be augmented enough to be classified as LOS C.
- *** 3. No changes are proposed for this segment of Auburn Folsom Road by the Draft General Plan.

NOTE: Traffic volumes for Alternative 6 from Figure 56, pg. 315, Auburn/Bowman Community Plan. This figure shows Future Daily Traffic Volumes for full buildout of County's Proposed Land Use Plan, for the Community Plan Area and existing Auburn zoning within City Limits (assuming the existing (1988) road network). The volumes shown are not precisely representative of Alternative 6 because they include proposed land uses outside of the City's Plan Area and are based on buildout of existing zoning within City Limits rather than proposed land use designations.

FIGURE 10-11
ALTERNATIVE COMPARISON: BUILDOUT TRAVEL DEMAND
FORECASTS & LEVEL OF SERVICE WITH & WITHOUT PROPOSED
GENERAL PLAN IMPROVEMENTS

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Another complication regarding the downtown street system is the added funding uncertainty raised by the possibility that no annexations will occur. Without annexations, revenues to the City may not keep pace with increasing demands on its street system. This impact could be averted through a joint City/County mitigation fee program, but this cannot be assured in the context of this EIR (see Mitigation Measures).

Congestion within the Sphere of Influence. Of the four street segments evaluated by the City within the Sphere of Influence, three will be at LOS F before improvements and two will remain at LOS E even after the improvements are made as described below:

- State Route 49 north of Bell Road, projected at LOS F before improvements, will improve to LOS C after anticipated widening to six lanes is completed.;
- State Route 49 north of Luther Road, projected at LOS F before improvements, will remain at LOS E after the anticipated widening to six lanes is completed;
- Bell Road, projected at LOS F, will remain at LOS E after being upgraded to a four lane arterial.

As described above under "Congestion within the City" widening SR49 to six lanes is not assured at this time. Also, the Auburn/Bowman Community Plan traffic analysis projected conditions at 26 intersections within the City's Sphere of Influence. Thirteen of these intersections were projected to be below LOS D, four of which were on SR49; four of the thirteen impacted intersections were projected to remain below LOS D even after the County's identified road improvements were made. For this and other reasons, traffic impacts are found to be significant and unmitigatable (Auburn/Bowman Community Plan Draft EIR, Planning Concepts, August 1992, p. 273).

It should be noted that alternative means of avoiding significant effects were considered in the Auburn/Bowman Community Plan Circulation Element. Those considered fall into the following broad categories:

- a) A Highway 49 Bypass
- b) Improved Transit
- c) Transportation System Management
- d) Alternative Capital Improvements
- e) Alternative Land Uses

Table 10-5
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY TABLE
PROPOSED AUBURN/BOWMAN COMMUNITY PLAN: FULL BUILDOUT

N/S Street	Intersections E/W Street	Location	No Buildout Existing(1988) Conditions (LOS)	Buildout with Existing(1988) Rd Network (LOS)	Buildout with "BaseSet" Impvt(LOS)
1. State Route 49	Dry Creek Rd	SOI	A	F	C
2. State Route 49	Bell Road	SOI	E	F	F
3. State Route 49	Atwood Drive	SOI	A	F	C
4. State Route 49	Luther Road	SOI	C	F	F
5. State Route 49	Elm Avenue	City	B	F	F
6. State Route 49	I-80 Westbound	City	C	F	F
7. State Route 49	I-80 Eastbound	City	A	B	F
8. State Route 49	Lincoln Way	City	A	F	D
9. Bowman Road	Auburn Ravine	SOI	A	E	A
10. I-80 WB Offramp	Auburn Ravine	SOI	A	C	A
11. I-80 EB Off/Onramp	Auburn Ravine	SOI	C	F	A
12. Lincoln Way	Foresthill Road	SOI	B	F	B
13. I-80 Westbound	Bell Road	SOI	A	F	A
14. I-80 Eastbound	Bell Road	SOI	A	E	B
15. Lincoln Way	Elm Avenue	City	C	F	F
16. I-80 WB/Lucky's	Elm Avenue*	City	A	C	D
17. I-80 Eastbound	Elm Avenue	City	B	F	F
18. Maple Avenue	Lincoln Way	City	A	E	F
19. Auburn Folsom Rd	High Street/Sac*	City	A	F	E
20. High Street	Lincoln Way	City	A	E	A
21. SR49	Quartz Drive	SOI	B	F	E
22. Lincoln/Borland Ave	SR49	City	B	F	F
23. Lincoln Way	Russell Road	SOI	A	A	A
24. SR49	Loren/Florence	OUT	n/a	F	E
25. Bowman Road	Luther Road	SOI	A	A	A
26. Bowman Road	Bell Road	SOI	A	E	A
27. New Airport Road	Bell Road	SOI	A	F	A
28. Bald Hill Road	Mt. Vernon Road	SOI	A	A	A
29. Mt. Vernon Road	Atwood Road	SOI	A	A	A
30. Ophir Road	Wise Road	OUT	A	A	A
31. Nevada Street	Fulweiler Avenue	City	A	A	A
32. Nevada Street	Palm Avenue	City	A	A	A
33. Auburn Folsom Rd	Indian Hill Road	City	A	F	E
34. Auburn Folsom Rd	Maidu Drive	City	A	F	D
35. Mikkelsen Drive	Palm Avenue	City	A	A	A
36. Auburn Ravine Rd	Palm Avenue	City	A	C	A
37. Quartz Extension	Bell Road	SOI	n/a	E	A
38. Richardson Drive	Bell Road	SOI	A	A	A
39. Joeger Road	Bell Road	SOI	A	A	A
40. SR49	Willowbush	SOI	n/a	n/a	D
41. SR49	New Airport	SOI	n/a	n/a	D
42. SR49	Bohemia	SOI	n/a	n/a	D
43. SR49	Live Oak	SOI	n/a	n/a	D
44. SR49	Edewood	SOI	n/a	n/a	D
45. SR49	Nevada	SOI	n/a	n/a	F
46. SR49	Palm	City	n/a	n/a	E

SOURCE: Adapted from the Auburn/Bowman Community Plan Circulation Element, July 1992 pp. 305-309

Table 10-6
IMPACT AVOIDANCE STRATEGIES

Strategy	Description	Part of Plan	Potential Effectiveness (Compared to proposed Plan)	Cost	Environmental Concerns
a. West Highway 49 Bypass	<ul style="list-style-type: none"> - Through traffic road west of SR 49. 	No	<ul style="list-style-type: none"> - Reduces total hours of delay by 1881 - Reduces LOS D/E/F Inter-section by 10 	\$48 million	<ul style="list-style-type: none"> - Growth-inducement and disruption of rural character.
East Highway 49 Bypass	<ul style="list-style-type: none"> - Through traffic road east of SR 49 via Bell Rd 	No	<ul style="list-style-type: none"> - Reduces total hours of delay by 673 - Reduces LOS D/E/F Inter-sections by 6 	\$30 million	<ul style="list-style-type: none"> - Same as above to a lesser extent.
b. Improved Transit	<ul style="list-style-type: none"> - More busses, reduced intervals 	Yes	<ul style="list-style-type: none"> - "Small effect on congestion based upon current projected ridership" (p.52) 	\$810,000 (initial capital costs only) (p.51)	Few
c. Transportation System Management	<ul style="list-style-type: none"> - Rideshare Ordinance - Park and Ride Lots - Signal Coordination - Others 	Yes	<ul style="list-style-type: none"> - Rideshare and park & ride not known - Probably small - Signal coordination 10-15% (p.54) 	N/A	Few
d. Alternative Capital Improvements	<ul style="list-style-type: none"> - Rail along SR 49 - Second level of SR 49 in existing corridor (causeway) - Separated lane for through traffic & supplementary over-crossings - Over crossings at major intersections 	No	<ul style="list-style-type: none"> - Rail: no tangible reduction in delays (p.43) - Partially effective (p.46) - Very little (p.46) 	<ul style="list-style-type: none"> \$100 million \$150 million \$28 million 	<ul style="list-style-type: none"> - Business access conflicts - Visual clutter/urban appearance - Visual clutter
e. Alternative Land Uses	<ul style="list-style-type: none"> - Alternative 1 has: - Approx. same population as proposed plans - 81 fewer commercial acres than proposed plan 	No	<ul style="list-style-type: none"> - Reduces total hours of delay by 1099 hours - Reduces LOS D/E/F Intersections by 11 	No capital outlay	See Alternatives section.

Table 6 above summarizes these impact avoidance strategies. As shown, even the most costly of the strategies is incapable of avoiding significant impacts. The reduction in total hours of vehicle delay is incremental for each strategy in comparison to the total projected delay of 9331 hours.

The most effective strategy evaluated was the West Highway 49 Bypass, but the 1881 hours of delay provided still falls well short of effective mitigation.

Conclusion: Based upon the above criteria and analysis impacts of increased traffic congestion will be significant and unmitigatable. This holds true for the street system within both the City Limits and Sphere of Influence.

2. **Impacts of proposed improvements.** The widening of roadways and related improvements will create a number of impacts including grading and vegetation loss, and associated visual and erosion impacts. The severity of these impacts will vary based upon the size of the area affected, the visual quality of that area, whether or not it has been previously disturbed as part of road shoulder grading, the affected topography, and the time of year that grading occurs (erosion). Short-term disruption, and long-term change in access to some businesses will occur. Given the conceptual nature of the improvements, it is not possible to provide detailed impact analysis for each of the improvements. However, Table 7 lists the types of impacts which may occur and roughly gauges their severity within the limitations of the current analysis (specific designs are not available). This is very generalized analysis based primarily on area-wide mapping. The impacts will need to be reviewed on a case-by-case basis as part of the normal environmental review procedure.

Conclusion: Based upon the preliminary examination of road improvement impacts, it appears that significant effects on visual character, riparian habitat, and tree stands will occur and that these effects may be unmitigatable in some locations (particularly visual impacts).

3. **Effects of increased traffic on Quality of Life.** Large increases in traffic on residential streets can influence safety, noise, aesthetics, air quality and other factors that combine to affect quality of life. The TIRE method is used in this EIR to characterize quality of life impacts relative to traffic volumes. TIRE is a numerical representation of a resident's perception of the effect of street traffic on activities such as walking, cycling and playing, and on daily tasks such as maneuvering an auto out of a residential driveway. An acronym for "Traffic Infusion on Residential Environment", TIRE is expressed by index values that range from zero, representing the least affect of traffic, to five, representing the severest affect:

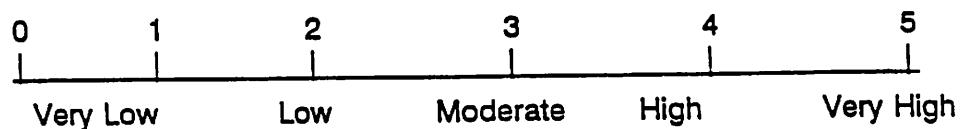


Table 10-7
AUBURN AREA GENERAL PLAN
CAPITAL IMPROVEMENT PROJECT - INITIAL IDENTIFICATION OF IMPACTS

No. Project	Project Limits	Apprx. Prj Length (miles)	Stand- ard (lanes)	Initially Identified Impact
I. ROAD NETWORK IMPROVEMENTS				
1 SR49	Joeger Rd to I-80	4.8	6	Cumulative visual character change (Significant, unmitigatable with other improvements). Potential short-term access disturbance (significant, mitigatable) Visual character change (significant, unmitigatable) Tree Loss (significant, mitigatable) Visual degradation, particularly in vicinity of Glenview Dr (significant, unmitigatable) Vegetation loss (significant, mitigatable) Visual Degradation (significant, mitigatable) Visual degradation (significant, mitigatable) Tree Loss (significant, mitigatable) Visual character change (significant, unmitigatable) Riparian habitat impacts (significant, mitigatable) Tree loss (significant, mitigatable) Visual character change (significant, mitigatable)
2 Bell Road	SR49 to I-80	2.8	4	
3 Indian Hills	Auburn Folsom Rd to I-80	2.3	4	
4 Auburn Folsom Rd	Indian Hill Rd to Maldu Dr	0.4	4	
5 Nevada St	SR 49 to I-80	1.7	3	
6 Mt Vernon Rd	Atwood Rd to Nevada St	3.0	2	
7 Atwood Rd	SR49 to Mt Vernon Rd	1.7	2	

Assumptions

Visual Effects: Significant if high quality visual corridors affected or if changes substantial enough to cause a broad change in character.
Unmitigatable if change is permanent.

Riparian Effects: Significant if riparian areas affected
Unmitigatable if multiple, angular crossings made or if riparian habitat is affected.
Significant if large oak woodland or oak ponderosa pine woodland crossed.

Tree Loss: Significant, mitigatable through Tree Preservation Ordinance.

TIRE is based on a logarithmic association between traffic volume and residential environment and as such predicts three interesting relationships.

According to TIRE, a given change in street traffic volume will cause a greater impact on residential environment on a street with a low pre-existing volume than it will on a street with a higher pre-existing volume. Yet, any traffic change that would cause an index change of 0.1 or more would be noticeable to street residents. Streets with TIRE levels above the mid range index of 3.0 are traffic-dominated while those with indexes below 3.0 are better suited for residential activities. Table 8 presents the TIRE Index associated with various traffic levels.

The TIRE Index (Table 10-8) values reflect data found in work by Appleyard of the University of California at Berkeley (with study design assistance by Goodrich) and considerable earlier thought by Buchanan of the Ministry of Transport, England. The TIRE concept was finalized in 1975 by Goodrich, a developer of the concept of trip generation research, the traffic model and other modern traffic engineering tools.

For the purpose of this EIR, conversion of a residential street to a traffic-dominated street is considered a significant impact.

Traffic volume projections for local streets are not available and thus direct application of the TIRE Index to individual streets is not possible. However, based on the projected doubling or more in traffic on arterials, it is likely that some residential streets will become traffic dominated. There is no way to avoid this impact without street barriers which are contrary to City policy and which have their own impacts on the circulation system and public safety.

Conclusion:

Based upon the above criteria and analysis, the impact of traffic on quality of life will be significant and unmitigatable.

Table 10-8
TIRE INDEX

Existing Volume Range (Vehicles per Day)	TIRE Index	Minimum Daily Volume Increase to Produce Index Change	
		Noticeable Change in TIRE Index	Change in TIRE Index
29-35	1.5	+6	+15
36-44	1.6	+8	+20
45-56	1.7	+10	+25
57-70	1.8	+13	+32
71-89	1.9	+17	+41
90-110	2.0	+22	+52
111-140	2.1	+29	+65
141-180	2.2	+40	+80
181-220	2.3	+52	+100
221-280	2.4	+65	+125
281-350	2.5	+79	+160
351-450	2.6	+94	+205
451-560	2.7	+114	+260
561-710	2.8	+140	+330
711-890	2.9	+170	+415
↓(Traffic Dominated)↓			
891-1,100	3.0	+220	+520
1,101-1,400	3.1	+290	+650
1,401-1,800	3.2	+380	+800
1,801-2,200	3.3	+500	+1,000
2,201-2,800	3.4	+650	+1,300
2,801-3,500	3.5	+825	+1,700
3,501-4,500	3.6	+1,025	+2,200
4,501-5,600	3.7	+1,250	+2,800
5,601-7,100	3.8	+1,500	+3,500
7,101-8,900	3.9	+1,800	+4,300
8,901-11,000	4.0	+2,300	+5,300
11,001-14,000	4.1	+3,000	+6,500
14,001-18,000	4.2	+4,000	+8,000
18,001-22,000	4.3	+5,200	+10,000
22,001-28,000	4.4	+6,600	+13,000
28,001-35,000	4.5	+8,200	+17,000
35,001-45,000	4.6	+10,000	+22,000
45,001-56,000	4.7	+12,200	+28,000
56,001-71,000	4.8	+14,800	+35,000
71,001-89,000	4.9	+18,000	+43,000

SOURCE: Goodrich Traffic Group, 1975.

4. Increased demand on transit service. With an increased population will come increased demand on transit. The Draft General Plan contains the following Goal and Policies related to transit (see Table 10-9):

Table 10-9
AUBURN GENERAL PLAN
RELEVANT TRANSIT GOALS AND POLICIES

Goal 3 Encourage transportation alternatives to the single-occupant automobile.

Policies

- 3.1 Match land use density to transit service routes and roadway capacity.
- 3.2 Modify and update transit routes and schedules to reflect changes in service demand.
- 3.3 Encourage and support programs which will increase ridesharing.
- 3.4 Support the establishment of inter-city rail service and other modes of transportation connecting the Bay Area, Sacramento, Roseville, Auburn, Colfax, and surrounding cities.
- 3.5 The City shall develop and implement an ongoing Trip Reduction Implementation Program applicable to major development projects and employers.
- 3.6 The City shall prepare a transit master plan for the City transit system.
- 3.7 Continue participation with the Placer County Transportation Commission

These are relatively detailed policies with a connection to implementation measures. As the City annexes lands, it will presumably take on more of the responsibility for transit service in the area. This could be in the form of increased area of direct service by city-operated transit or in the form of financial contributions to the Placer County Transit. The newly-annexed revenue producing land uses would provide the funds for these activities.

Conclusion:

Based upon the above analysis, impacts to transit services will be less than significant.

5. Increased demand on air transportation. According to the Auburn Municipal Airport Master Plan the potential exists for significant increases in operations and aircraft parking. The Draft General Plan contains the following goal and policies related to this concern. (See Table 10-10)

Table 10-10
AUBURN GENERAL PLAN
RELEVANT AIRPORT TRANSIT GOALS AND POLICIES

Goal 4 Protect the public investment in the airport.

Policies

- 4.1 Minimize the impacts of future development on the Airport by abiding by the City adopted Airport comprehensive Land Use Plan.
- 4.2 Continue participation with the Airport Land Use Commission.
- 4.3 Support the continuance of the Auburn Airport as an aviation transportation link.
- 4.4 The City shall prepare Airport Operation Standards that shall financially enhance the Airport.

These policies appear to provide a framework for any needed future airport improvements. Additionally, if for some reason these improvements cannot be funded, this does not constitute a significant impact because airport expansion is not a fundamental or critical need as are other transportation systems and services, provided that emergency service flights, California Highway Patrol Division of Forestry and Fire Protection, can continue to operate.

Note: Effects of incompatible land uses on the airport are discussed in the Land Use section. Noise from the airport is evaluated in the Noise section.

Conclusion:

Based upon the above criteria and analysis, the impacts of increased demand on the Auburn Airport will be less than significant.

6. Cumulative traffic impacts - Included under discussion under Impact 1, above.

The following discussion from pages Final-55, -56 and -57 resulted from changes made by the Planning Commission to the draft Plan:

The land use designation changes made by the Planning Commission increase the predicted number of vehicle trips generated in the Plan area. The changes result in an increase of 226 housing units creating about 2300 trips per day which is a relatively small traffic increase in the context of the Plan wide trip generation. The non-residential changes primarily consist of a shift in acreage from Mixed Use to Commercial (about 100 acres) and from Industrial to Commercial/Office (230 acres) and to Rural Density Residential (80 acres). Most of the Mixed Use to Commercial changes are made to more accurately reflect existing uses and pending projects in the Sphere of Influence. However, this change affects the amount of traffic predicted because the Mixed Use designation allows only up to 70% commercial compared to the 100% within the Commercial designation itself. Thus, about 1/3 of the 100 acres changed from Mixed Use to Commercial use would have commercial trip generation rates rather than residential or office rates. This could have an effect on the level of service predictions contained within the General Plan as well as on the Plan's list of improvements needed to maintain a Level of Service of D. Any added improvements, however, are likely to be adjustments in the recommendations rather than major changes such as the addition of new lanes to roads (Richard Plecker, Auburn Public Works, Personal Communication 7/22/93).

It should be noted that, even if the changed trip generation lowers level of service below D, the DEIR conclusions are not altered because the County's estimates of intersection level of service were utilized to provide a worst case view of future traffic conditions; several intersections within the City were projected to fall below Level of Service D (P. 10-36). Thus, the DEIR has a conclusion of significant, unmitigable impacts.

Effects of Newly Identified Road Improvements ~ Among the revisions made to the September, 1992 Draft Plan is the addition of five new road segments to the Recommended Total Street System Improvements (Revised Figure V-13 follows this page). The new road segments are:

- Richardson Drive extension
- East Frontage Road
- High Street extension
- Borland Avenue extension
- Edgewood Road extension

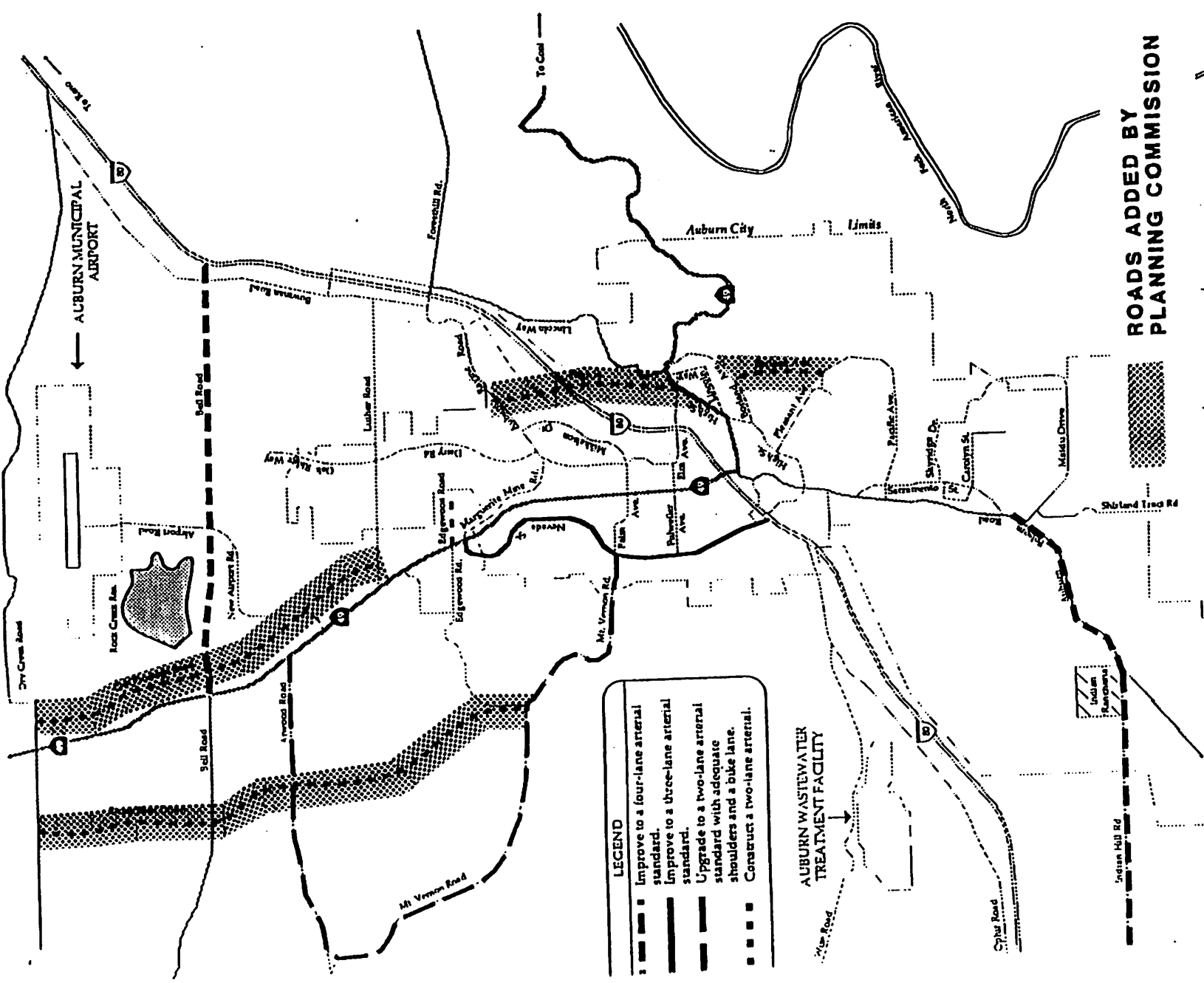
The impacts of these road improvements are described in Table A. These impacts are additional to those described on page 10-45 of the DEIR. However, the overall DEIR conclusion of significant, and in some cases unmitigable, impact of road improvements is unaltered.

Ref:
Final
EIR,
pp.55,
56

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**FIGURE V-13
RECOMMENDED LOCAL STREET SYSTEM IMPROVEMENTS**



Note: Exact alignments are to be determined at a later date. Proposals are for illustration purposes only and do not reflect specific locations.

July 1992

**Table B
ADDITIONAL ROAD IMPROVEMENT IMPACTS***

Project	Project Limits	Initially Identified Impact
Richardson Drive	Dry Creek Road to Bell Road	Land use character change** (significant, unmitigable) Visual impacts (significant, unmitigable due to arterial roadway through rural area) Geologic impacts (land disturbance, significant, mitigable) Riparian habitat impacts (significant, mitigable) Tree loss (significant, mitigable) Potential traffic noise impacts (adequate setbacks needed to mitigate)
Richardson Drive	Atwood Road to Edgewood and Mt. Veron	Land use character change** (significant, unmitigable) Visual impacts (significant, unmitigable due to arterial roadway through rural area) Geologic impacts (land disturbance, significant, mitigable) Riparian habitat impacts (significant, unmitigable) Potential traffic noise impacts (adequate setbacks needed to mitigate)
East Frontage Road	Dry Creek Road to Luther Road	Visual impacts (significant, mitigable) Riparian habitat impacts (significant, mitigable)
High Street	Auburn Ravine Road to High Street	Tree Loss (significant, mitigable) Traffic noise impacts to existing residences (potentially significant, unmitigable)
Borland Avenue	Borland Avenue to Pleasant Avenue	Less than significant effects.
Edgewood Road	Alta Mesa Drive to Hwy 49	Traffic noise impacts for existing residences (potentially significant, unmitigable)

* These impacts are in addition to those reported in the DEIR (p. 10-45)

** A new arterial in this relatively rural area is expected to result in land use character changes which cannot be mitigated. The introduction of a new noise source, an urban standard street width, and activity level not previously experienced cannot be avoided. Provision for generous setbacks (100 feet +) would assist in mitigating impacts but may not be possible given existing parcelization.

Assumptions

Visual Effects: Significant if high quality visual corridors affected or if changes substantial enough to cause broad change in character.

Riparian Effects: Significant if riparian areas affected

Unmitigable if multiple, angular crossings made or if riparian forest is affected.

Tree Loss: Significant if large oak woodland or oak ponderosa pine woodland crossed.

Generally, mitigable through Tree Preservation Ordinance.

Ref:
Final
EIR,
p.58

1a. Identification of intersection improvement methodology in the General Plan implementation section. The Draft General Plan should identify the means by which specific intersection deficiencies will be identified and how improvements will be funded. For example, the Plan should state whether any intersection improvements will be part of the five-year Capital Improvement Plan or if all improvements will be made through impact fees.

~~**1b. Addition of a policy to the General Plan calling for incorporation of needed Sphere of Influence improvements into the City's Capital Improvement Program as annexations take place. The City should make a clear policy commitment to road improvements needed in potential areas of annexation the County's Capital Improvement Program could provide a basis for identifying necessary improvements.**~~

1be. Addition of a policy and implementation measures calling for a joint City/County mitigation fee program to address impacts to the City's street system (particularly downtown) and appropriate locations in the Sphere of Influence. This fee program should entail joint mitigation fee collection into a single fund targeting needed improvements. The trip end fee should be modified by the establishment of benefit areas so that projects which are more impacting pay a higher amount. For example, some projects within the unincorporated area may have a greater impact than others because they affect both SR 49 and locations within the City Limits in a typical commuting pattern. Some examples of this type of area are:

- Luther Road
- Indian Hill Road
- Auburn Folsom Road
- Nevada Street
- Auburn Ravine Road
- Lincoln Way

- 1cd. Identification of specific Transportation Control Measures in the General Plan.** Draft General Plan Circulation Element Policy 1.3 calls for a Transportation System Management (TSM) program; this policy should be supplemented by the identification of selected Transportation Control Measures (TCM).

Several TCMs are described in the Air Quality section and not repeated in this section. They generally entail more emphasis on trip reduction through specific methods of carpooling, rideshare, alternative transportation modes, and inclusion of ancillary services in developments such as child care.

It should be noted that the Alternatives section evaluates the potential for reduced urban development to avoid significant congestion.

Effectiveness of Measure: These measures will provide only an incremental reduction in congestion and impacts will remain significant. Also, funding-related measures cannot be assured within the context of this EIR.

Implementation: a,b,c) General Plan update process; d) Primarily implemented through requirements on new and existing uses, possibly through a Trip Reduction Ordinance.

Mitigation Monitoring: a,b,c) General Plan update process; d) On-going monitoring by the Air Pollution District

- 2. Identification of the following mitigation needs in the General Plan to address the effects of road improvements:**

- 2a. Maximum feasible wetland avoidance and replacement and erosion control of exposed surfaces to reduce impacts on wetlands.** The following are potential methods of reducing impacts to wetlands.

- .1 Shifts in proposed road alignments to miss wetlands
- .2 Use of retaining walls to reduce fill slopes
- .3 Where wetlands cannot be avoided, recreation of wetlands in the project corridor or nearby.
- .4 Failing the above, payment of a mitigation fee for wetland banking.

Erosion control during and after construction is another important measure.

- 2b. Tree avoidance and tree replantings.** Planned road improvements should be designed to provide maximum feasible avoidance of trees. In some cases, this may involve a slight adjustment of alignment and in others a selective use of retaining walls. Trees lost should be replaced in the vicinity at a minimum 2:1 ratio.
- 2c. Minimization of cut and fill extent through selective use of retaining structures, and masking of cut and fill through complete revegetation with a variety of plant materials.**
- 2d. Identification of all rural roads in the General Plan as locally scenic and specification of the above measures and others as aesthetic standards.**

Effectiveness of Measure: The above measures will be effective in reducing impacts to wetlands and trees below the level of significance in some locations. Visual impacts often cannot be reduced below significance.

Implementation: Road improvement design

Mitigation Monitoring: Further environmental review

3. No mitigations are available to address significant impacts to quality of life on residential streets.
- 4,5 No mitigations are needed related to less than significant effects on transit and air transportation services.
6. Mitigations related to cumulative impacts are under #1 above.

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